



Read this document carefully before using this device. The guarantee will be expired by damaging of the device if you don't attend to the directions in the user manual. Also we don't accept any compensations for personal injury, material damage or capital disadvantages.

## ENDA ET1312 TEMPERATURE CONTROLLER

Thank you for choosing ENDA ET1312 temperature controller.

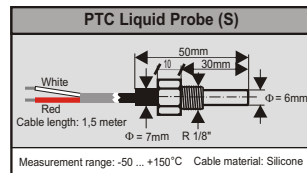
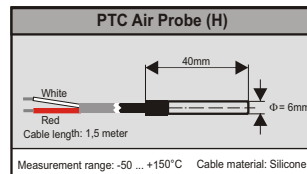
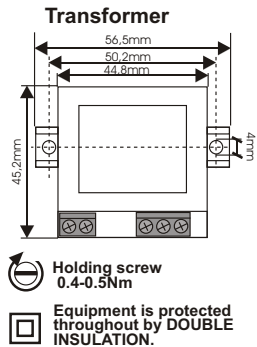
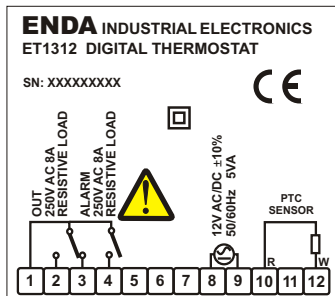
- \* 34 x 77mm sized.
- \* On-Off control.
- \* Adjustable offset for PTC sensor.
- \* Heating and cooling control is made by one relay.
- \* Selectable cooling or heating control.
- \* The maximum and minimum values of the set point can be limited.
- \* Output state can be selected On or Off in the case of probe failure
- \* Selectable independent, deviation or band alarm
- \* Having CE mark according to European Norms.



| Outputs | Supply Voltage                        | Probe            | Order Code      | NOTE :<br>CABLE:<br>X.X : Cable length<br>For example: 4.0 = 4.0m<br>1.5m (standard) |
|---------|---------------------------------------|------------------|-----------------|--|
| Relay   | 230V AC +10% -20%<br>(by transformer) | PTC air probe    | ET1312-H-X.X    |  |
|         |                                       | PTC liquid probe | ET1312-S-X.X    |  |
|         | 12V AC/DC ±10%                        | PTC air probe    | ET1312-12-H-X.X |  |
|         |                                       | PTC liquid probe | ET1312-12-S-X.X |  |

### ATTENTION !

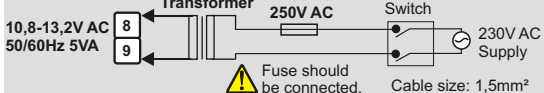
ENDA ET1312 is intended for installation in control panels. Make sure that the device is used only for intended purpose. The electrical connections must be carried on by a qualified staff and must be according to the relevant locally applicable regulations. During an installation, all of the cables that are connected to the device must be free of energy. The device must be protected against inadmissible humidity, vibrations, severe soiling and make sure that the operation temperature is not exceeded. The cables should not be close to the power cables or components.



! Please don't dip the Sensor in liquidity and keep in dry place !

### NOTE :

#### SUPPLY:



If necessary use for the load separate fuse !

- Note :
- 1) Mains supply cords shall meet the requirements of IEC 60227 or IEC 60245.
  - 2) In accordance with the safety regulations, the power supply switch shall bring the identification of the relevant instrument and it should be easily accessible by the operator.

#### SENSOR INPUT:

Pay attention to the color of the PTC probe cables while connecting them to the PTC SENSOR input of the device.

## TECHNICAL SPECIFICATIONS

| ENVIRONMENTAL CONDITIONS  |   |
|---|---|
| Ambient/storage temperature   | 0 ... +50°C/-25 ... +70°C (with no icing)                     |
| Max. relative humidity  | 80%, up to 31°C decreasing linearly 50% at 40°C               |
| Rated pollution degree  | According to EN 60529 Front panel : IP60<br>Rare panel : IP20 |
| Height  | Maximum 2000m   |
| ! Do not use the device in locations subject to corrosive and flammable gasses. |   |

| ELECTRICAL CHARACTERISTICS |  |
|----------------------------|--|
| Supply voltage             | 230V AC +10% -20%, 50/60Hz, or 12V AC/DC ± 10%, 50/60Hz  |
| Power consumption          | Max. 5VA   |
| Wiring                     | 1.5mm² screw-terminal connections.   |
| Scale                      | -50 ... +150°C   |
| Sensitivity                | 1°C  |
| Accuracy                   | ±1% (of full scale)  |
| EMC                        | EN 61326-1: 1997, A1: 1998, A2: 2001 (Performance criterion B is satisfied for EMC tests. The device is designed to operate in controlled electromagnetic environment) |
| Safety requirements        | EN 61010-1: 2001 (Pollution degree 2, overvoltage category II)   |

| OUTPUTS  |   |
|--|---|
| OUTPUT   | Relay: 250V AC, 8A (for resistive load), NO+NC ; ½ HP 250V AC Cosφ=0.4 (for inductive load) |
| ALARM  | Relay: 250V AC, 8A (for resistive load), NO ; ½ HP 250V AC Cosφ=0.4 (for inductive load)    |
| Life expectancy for relay  | Mechanical 30.000.000 operation; Electrical 100.000 operation.                              |
| Note: The relay contacts are suitable for in-line switching of compressors up to 0,5 HP at 240V AC or 1/4 HP at 110V AC. |   |

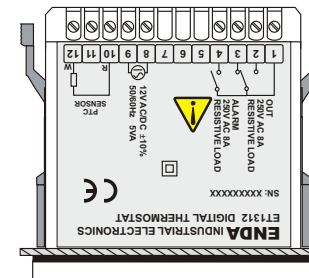
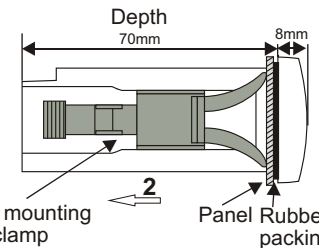
| CONTROL           |                                |
|-------------------|--------------------------------|
| Control type      | Dual-setpoint control          |
| Control algorithm | On-Off control                 |
| Hysteresis        | Adjustable between 1 ... 20°C. |

| HOUSING  |  |
|--|--|
| Housing type   | Suitable for flush-panel mounting.   |
| Dimensions   | W77xH34xD70mm  |
| Weight   | ET1312 : Approx. 375g (after packing the device ,transformer and a probe)<br>ET1312-12 : Approx. 180g (after packing the device and a probe) |
| Enclosure material   | Self extinguishing plastics  |
| ! While cleaning the device, solvents (thinner, benzene, acid etc.) or corrosive materials must not be used. |  |

### Dimensions



For removing mounting clamps:  
Push out the flush-mounting clamp in direction 1 as shown in the figure below. Then, pull out the clamp in direction 2.



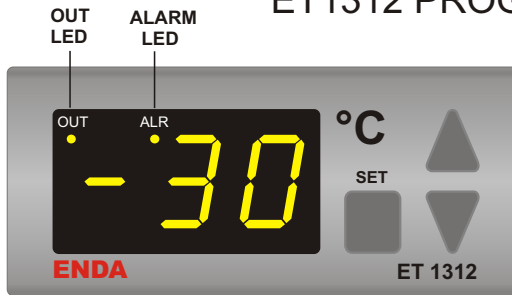
Flush mounting clamp

Panel cut-out

Note: 1) Panel thickness should be maximum 7 mm.  
2) If there is no 60mm free space at the back side of the device, it would be difficult to remove it from the panel.

up to date: 240805, modification reserved and can be change any time previous notice !

# ET1312 PROGRAMMING DIAGRAM



Increment key



Used for increasing the setpoint value, as well as the parameter when in programming. When held down for a few seconds, the change rate accelerates.

Decrement key

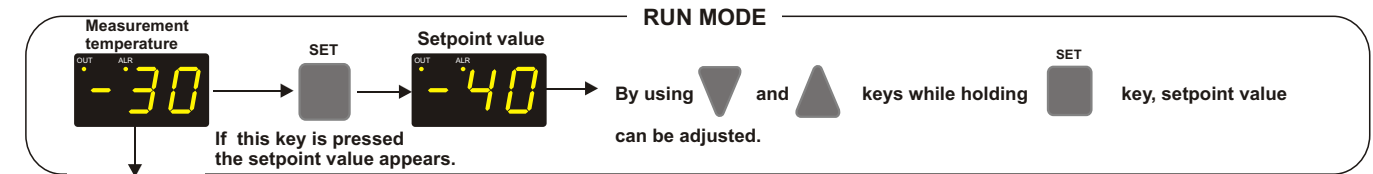


Used for decreasing the setpoint value, as well as the parameter when in programming. When held down for a few seconds, the change rate accelerates.

Programming key



Used for adjusting the value of the setpoint in the run mode and for adjusting the selected parameter in the programming mode.



If both & keys are pressed and held for 5 seconds, programming mode is entered.

## PROGRAMMING MODE



If no key is pressed within 25 seconds, the device will time out back to run mode. Alternatively, re-energising the device, run mode is entered.

### ERROR MESSAGE



Means the temperature sensor is broken or the temperature is out of the scale range

### Alarm Output Types

